

# SIGRAFINE® R6810

**Material:** Graphite

**Forming:** Isostatically pressed

**Application:** Semiconductor, photovoltaics

## Material data of SIGRAFINE® R6810

Typical properties	Units	Test standards	Values*
Average grain size	µm	ISO 13320	20
Bulk density	g/cm <sup>3</sup>	DIN IEC 60413/204	1.82
Open porosity	Vol. %	DIN 66133	11
Medium pore entrance diameter	µm	DIN 66133	3.3
Coefficient of permeability (ambient temperature)	cm <sup>2</sup> /s	DIN 51935	0.3
Rockwell hardness HR <sub>10/100</sub>		DIN IEC 60413/303	95
Resistivity	µΩm	DIN IEC 60413/402	10
Flexural strength	MPa	DIN IEC 60413/501	45
Compressive strength	MPa	DIN 51910	100
Dynamic modulus of elasticity	MPa	DIN 51915	10 x 10 <sup>3</sup>
Thermal expansion (20 - 200 °C)	K <sup>-1</sup>	DIN 51909	4.1 x 10 <sup>-6</sup>
Thermal conductivity (20 °C)	Wm <sup>-1</sup> K <sup>-1</sup>	DIN 51908	140
Ash content	ppm	DIN 51903	**

\* Typical average values of different rectangular and round block sizes. The actual individual block values might vary depending on dimension and format.

\*\* Ash value according to purity specifications.

For any engineering/design purposes please always contact our technical sales team.



**Graphite Materials & Systems | SGL CARBON GmbH**  
 Sales Europe/Middle East/Africa | [gms-europe@sglcarbon.com](mailto:gms-europe@sglcarbon.com)  
 Sales Americas | [gms-americas@sglcarbon.com](mailto:gms-americas@sglcarbon.com)  
 Sales Asia/Pacific | [gms-asia@sglcarbon.com](mailto:gms-asia@sglcarbon.com)  
[www.fine-grain-graphite.com](http://www.fine-grain-graphite.com) | [www.sglcarbon.com](http://www.sglcarbon.com)

### TDS R6810.00

04 2019/0 E Printed in Germany

®registered trademarks of SGL Carbon SE

This information is based on our present state of knowledge and is intended to provide general notes on our products and their uses. It should therefore not be construed as guaranteeing specific properties of the products described or their suitability for a particular application. Any existing industrial property rights must be observed. The quality of our products is guaranteed under our "General Conditions of Sale".